



# Volume 2

Chapter 24 Water-Dependent Recreation



Water-dependent recreation as a strategy helps water managers find opportunities to enhance recreation on and around the water. (DWR photo)

# Chapter 24 *Water-Dependent Recreation*

Water-dependent recreation includes a wide variety of outdoor activities that can be divided into two categories. The first category includes fishing, boating, swimming and rafting, which occur on lakes, reservoirs, and rivers. The second category includes recreation that is enhanced by water features but does not require actual use of the water, such as wildlife viewing, picnicking, camping and hiking.

Water-dependent recreation is included among the water management strategies because recreation is an important consideration for water managers. Water management, and water infrastructure, can have significant effects on recreation. By considering recreation during the planning process, water managers can take advantage of opportunities to enhance recreation, and can guard against actions that would limit recreation.

The Davis-Dolwig Act was passed by the California Legislature in 1961. This act established State policy regarding recreation and fish and wildlife enhancement at State-built water facilities, and specified the responsibilities of State agencies under the act. Compliance with the provisions of this act is an important consideration for state water managers when new facilities are built.

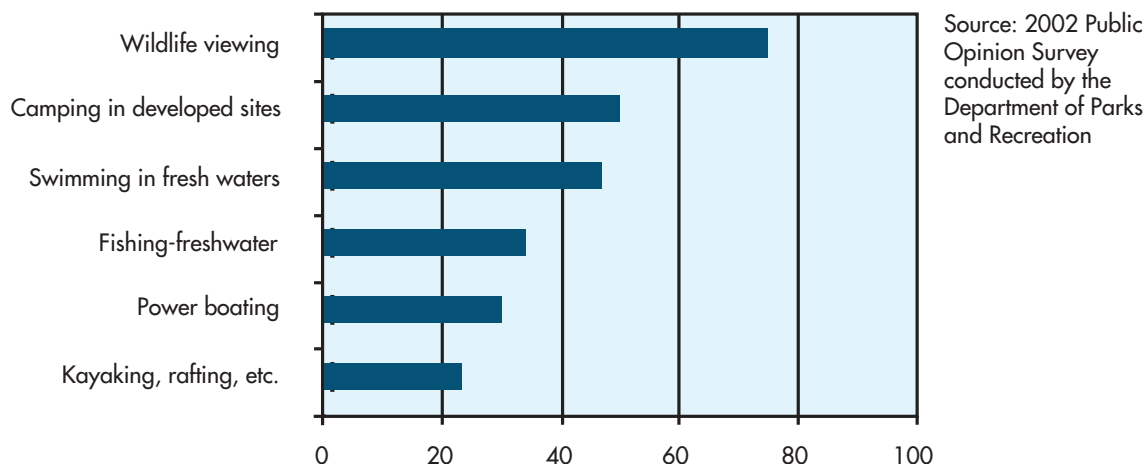
The management of lands and water resources by the State, including those associated with State water projects, invokes an implied principle of trust responsibility. State agencies managing lands and water resources are required to uphold public trust in the planning, management, use and protection of resource values. As trustee to public resources, the State must consider the benefit and use of land and water resources for recreational opportunities. As discussed in Chapter 2 of Volume 1, the Public Trust Doctrine recognizes recreation as one of the public trust uses that State agencies must take into account when managing tidelands and navigable waters and their tributaries.

## Current Participation in Water-Dependent Recreation in California

California's temperate climate provides a long season for outdoor recreation, and water is a magnet for outdoor recreation. Figure 24-1 shows the percentage of Californians participating in various water activities. In 2002, about 150 million adult participation-days were spent in recreation activities directly dependent on water. Many more visitor-days were spent in nature-based activities such as wildlife viewing, 55 million adult participation-days, and hiking, 36 million adult participation-days. In addition, water recreation is a large draw to tourists, helping to attract 28 million visitors in 2001. The 2002 *Public Opinion and Attitudes on Outdoor Recreation in California* clearly shows strong support for water-related activities.

- Slightly more than 80 percent of the respondents indicated that more outdoor recreation areas, such as picnic and camping sites, are needed at lakes and reservoirs.
- When asked to assign a priority score from 1 (extremely low priority) to 10 (extremely high priority) for providing more public-use opportunities at lakes and reservoirs, nearly 85 percent recorded a 5 or better and 16.7 percent gave it a 10, an extremely high priority.
- Nearly 79 percent of the respondents indicated that the availability of lakes, reservoirs, rivers, and wetlands was either very important or somewhat important factor in their overall enjoyment of their favorite outdoor recreation.



**Figure 24-1 Percentage of Californians participating in these water-dependent activities**

A significant number of Californians participate in a number of water-dependent recreational activities, which can be divided into two categories: (1) fishing, boating, swimming and rafting and (2) wildlife viewing, picnicking, camping and hiking.

## Benefits of Water-Dependent Recreation

Water-dependent recreation provides a wide range of health, social and economic benefits to California residents and visitors, while improving the quality of life. It encourages physical activity, such as swimming and paddling, as well as walking and bicycling along attractive waterside trails.

Water-dependent recreation influences tourism, business and residential choices. It increases expenditures in the community for travel, food and accommodations. In 2001, California had 28 million out-of-state tourists spending an average of \$76 a day and staying an average of four days. In addition, 196 million resident tourists spent an average of \$70 a day. Sales of sportfishing licenses and stamps generated more than \$49 million in annual revenue for the Department of Fish and Game in 2001 and 2002. Water-dependent recreation prompts long-term investments while creating jobs in concessions, hotels, restaurants, and retail stores. Figure 24-2 shows economic information for freshwater fishing, only a portion of all water-dependent recreation; total economic output from freshwater fishing exceeded \$3 billion.

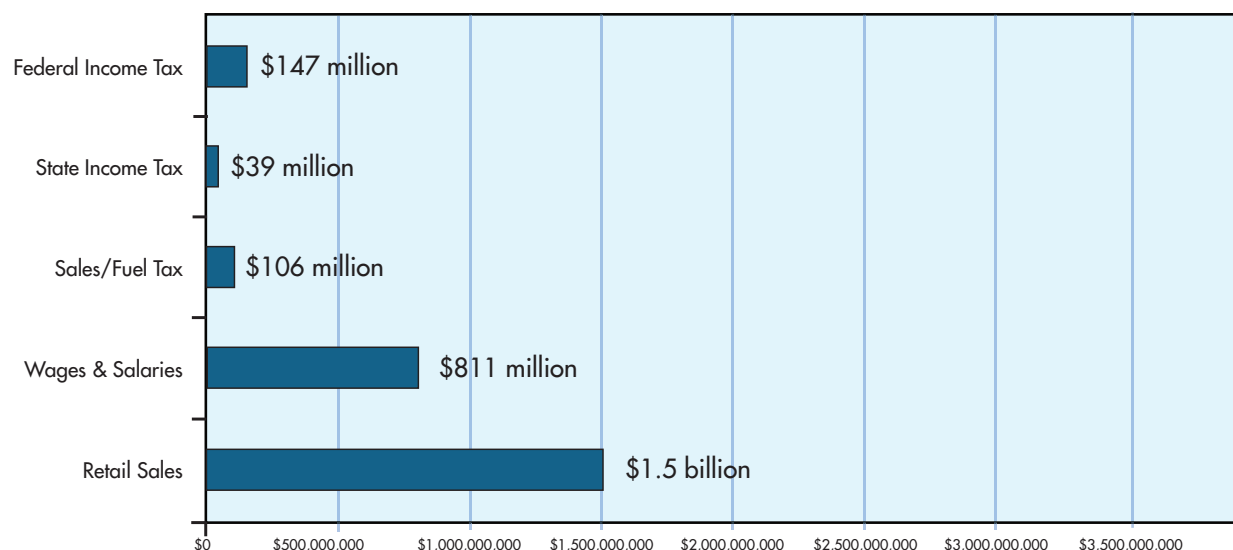
## Potential Costs

Initial development costs of recreation facilities can vary with the size of the project. Generally 3 percent to 6 percent of total project costs are allocated for development of perma-

nent recreation facilities. For example, the capital cost of recreation sites on the State Water Project is about 3 percent of all capital expenditures for the SWP. Annual maintenance costs are just over 3 percent of the initial development costs of recreation facilities.

## Major Issues Facing Development of More Water-Dependent Recreation Funding

Funding concerns usually transcend all other issues affecting outdoor recreation, including water-dependent recreation. These funding issues fall into two categories: planning and development of new recreational sites associated with water projects, and operation and maintenance of recreation sites once they are in place. When new dams, reservoirs or canals are being built, there may not be enough money to fully incorporate recreation. One reason for this is that the beneficiaries of recreation may be different from the other beneficiaries of the water project, requiring complex funding mechanisms to fully support recreation planning. This is a significant issue in State Water Project planning: The Davis-Dolwig Act specifies that water users shall not be charged for the cost of recreation facilities, but other funding mechanisms have not always been made available. Maintenance of recreation facilities may be more susceptible to funding cuts during poor economic condi-

**Figure 24-2 Economic output to California from freshwater fishing by licensed anglers (2.2 million) in 2001**

Water-dependent recreation influences tourism, business, and residential choices. It increases expenditures in the community for travel, food, and accommodations. Total economic output from freshwater fishing exceeded \$3 billion in 2001, which is only a portion of all water-dependent recreation.

tions than for other resources thought to be more essential. Without reliable funding, it is difficult for recreation providers to deliver quality, consistent and relevant facilities and services to meet growing demand. Many park and recreation providers have taken steps to reduce programs and operating costs to become more efficient on leaner budgets by raising fees and charges, reducing or eliminating services, delaying equipment purchases, and deferring land acquisition, facility developments, rehabilitation and renovation of aging infrastructure. Inconsistent funding also makes it difficult to plan for services and reduces the willingness of many service providers to offer new programs or to take risks.

#### *Online Sources of Information*

- *Department of Fish and Game, License and Revenue Branch, [www.dfg.ca.gov](http://www.dfg.ca.gov)*
- *American Sportfishing Association, [www.asafishing.org](http://www.asafishing.org)*
- *California Department of Tourism, [www.gocalif.ca.gov](http://www.gocalif.ca.gov)*

## Impacts to Natural Resources

Natural resource values often define the character and aesthetic appeal of a water-dependent recreation, making it desirable and interesting to visitors. Overuse, misuse and poorly planned uses of any recreation resource can degrade natural resource values and recreational experiences. Water management can affect the amount or timing of stream flow. This may have a good or bad effect on recreation. Water managers should consider the effects of their actions on all resource values, including recreation as well as ecosystem health. Increasing numbers of visitors pursuing outdoor recreation threatens the proper functioning of ecosystems, disrupts and displaces wildlife and degrades the natural, environmental and aesthetic quality of an area and ultimately the very recreational experience being sought. In addition, visitors unfamiliar with ecological processes or environmental ethics are often unaware of the consequences of their actions.

## Water Quality

Water quality can affect and be affected by water-dependent recreation. Poor water quality can have a negative impact on water-dependent recreation. A source of contamination is untreated sewage escaping from treatment facilities or broken sewer lines that have led to the highly publicized closure of public beaches. Another source is fertilizers and chemicals from

agricultural runoff that also contribute to the problem. Contaminated lakes, rivers and streams not only present health risks to those participating in water-contact recreation, but they can significantly diminish the recreation experience. In reverse, the negative effects water-dependent recreation can have on water quality are also of concern. Human-source contamination, such as body contact, untreated sewage, and petroleum products discharged from houseboats and other pleasure craft can be a significant problem to water meant for drinking.

## Coordination

Funding and impacts to natural resources are exacerbated by the lack of coordination between those who manage water resources and those who provide recreational services. All too often, agencies are limited in scope and effectiveness in recognizing and mitigating trends affecting resource conditions, particularly outside their immediate jurisdiction. While partnerships and cooperation between agencies, organizations and individuals have grown, efforts at the watershed or landscape level are often fragmented, and opportunities are missed to achieve broader goals, placing both resources and the public at risk.

## Recommendations to Help Provide Adequate Water-Dependent Recreation

1. In developing water-dependent recreation opportunities, jurisdictions should consider public needs as identified in the California Outdoor Recreation Plan.
2. Use existing data and new surveys to determine recreational needs that might be met by incorporating recreation more fully into new state and regional water project planning.
3. Develop closer working relationships among DWR, DFG, and DPR so that recreation planning is incorporated appropriately into CALFED program planning.
4. Conduct, and periodically re-examine, scientifically valid studies of the carrying capacity of proposed and existing sites for water-dependent recreation to help prevent degradation of water quality and wildlife habitat. Use data collected by other agencies, such as the U.S. Bureau of Reclamation, U.S. Army Corps of Engineers and for the Federal Energy Regulatory Commission, such as the results of FERC Relicensing studies.
5. Collect data on visitation rates vs. reservoir water levels and downstream flow rates, and use this data to help optimize the timing of water that is released or held for recreation.
6. Develop partnerships with universities to coordinate the monitoring of public recreation use, equipment and emerging outdoor and water-dependent recreation trends. Create partnerships with education providers to educate youth about preserving and protecting natural resources.
7. Promote and establish effective partnerships between federal agencies, state and local governments, and the private sector for operation, maintenance and law enforcement of water recreation sites.
8. Coordinate with the Department of Fish and Game in exploring the use of funding from the Bay-Delta Sport Fishing Enhancement Stamp to integrate new and improved public angling opportunities.

## Selected References

- California Department of Parks and Recreation, "Public Opinions and Attitudes on Outdoor Recreation in California 2002," [www.parks.ca.gov/planning](http://www.parks.ca.gov/planning)
- California Department of Parks and Recreation, "California Outdoor Recreation Plan 2002," [www.parks.ca.gov/planning](http://www.parks.ca.gov/planning)
- Public Research Institute, "Survey of Boat Owners in California"
- State Board of Forestry, California Department of Forestry and Fire Protection, "The California Fire Plan," [www.fire.ca.gov](http://www.fire.ca.gov)